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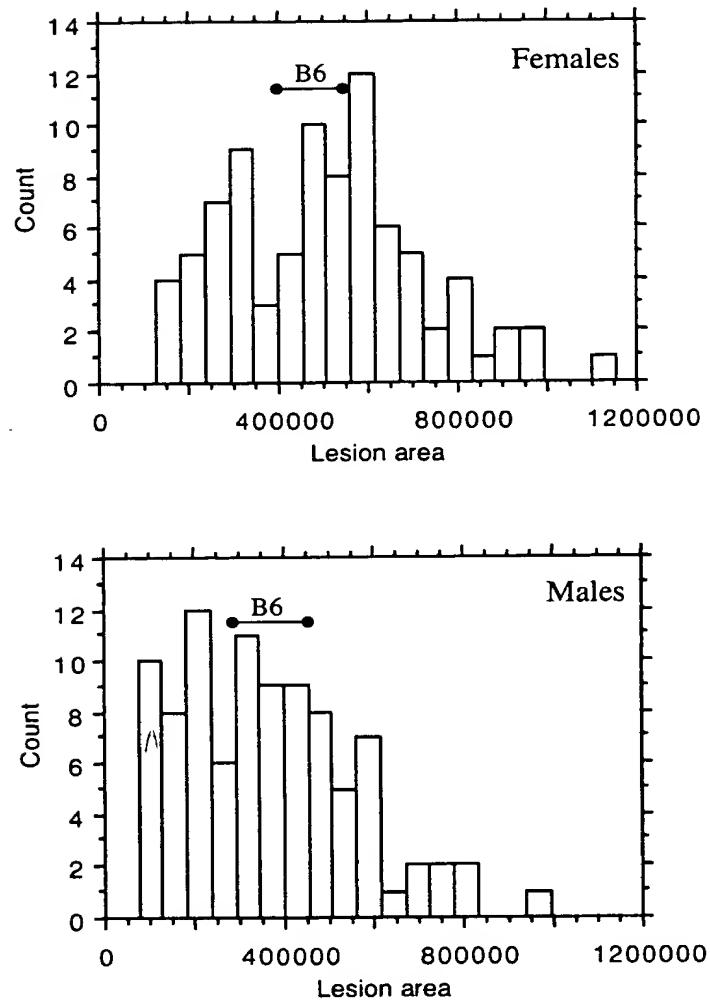
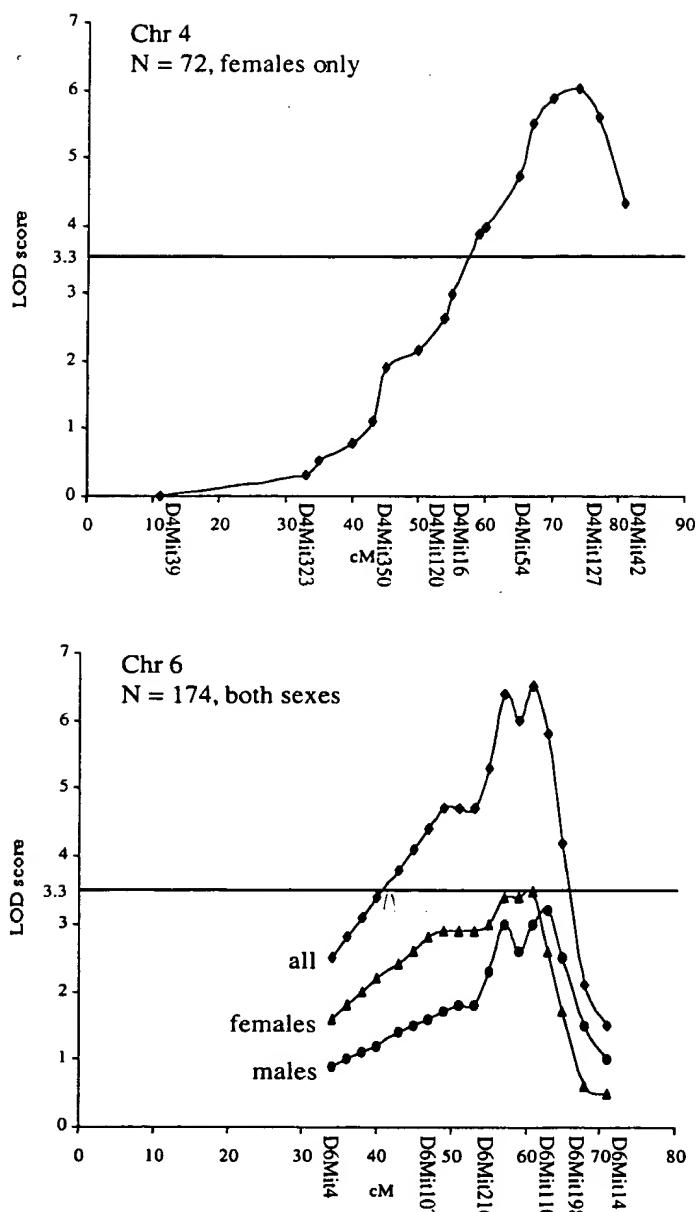


Figure 1

**Figure 2**

| | | | | | | |
|-----------------|-----|------------|------------|------------|------------|------------|
| B-Isoform 1 | 1 | ATGACTTTG | ATGACAAGAT | GAAGCCTGCG | AATGACGAGC | CTGATCAGAA |
| M-Isoform 1 | 1 | ATGACTTTG | ATGACAAGAT | GAAGCCTGCG | AATGACGAGC | CTGATCAGAA |
| Isoform 7 | 1 | ATGACTTTG | ATGACAAGAT | GAAGCCTGCG | AATGACGAGC | CTGATCAGAA |
| Isoform 8 | 1 | ATGACTTTG | ATGACAAGAT | GAAGCCTGCG | AATGACGAGC | CTGATCAGAA |
| Isoform 9 | 1 | ATGACTTTG | ATGACAAGAT | GAAGCCTGCG | AATGACGAGC | CTGATCAGAA |
| | | | | | | |
| B-Isoform 1 | 51 | GTCATGTGGC | AAGAACCTA | AAGGTCTGCA | TTTGCTTCT | TCCCCATGGT |
| M-Isoform 1 | 51 | GTCATGTGGC | AAGAACCTA | AAGGTCTGCA | TTTGCTTCT | TCCCCATGGT |
| Isoform 7 | 51 | GTCATGTGGC | AAGAACCTA | AAG----- | ----- | ----- |
| Isoform 8 | 51 | GTCATGTGGC | AAGAACCTA | AAG----- | ----- | ----- |
| Isoform 9 | 51 | GTCATGTGGC | AAGAACCTA | AAG----- | ----- | ----- |
| <- | | | | | | |
| | | | | | | |
| B-Isoform 1 | 101 | GGTCCCTGC | TGCTATGACT | CTGGTCATCC | TCTGCCTGGT | GTTGTCAGTG |
| M-Isoform 1 | 101 | GGTCCCTGC | TGCTATGACT | CTGGTCATCC | TCTGCCTGGT | GTTGTCAGTG |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| <--- TM ---> | | | | | | |
| | | | | | | |
| B-Isoform 1 | 151 | ACCCTTATTG | TACAGTGGAC | ACAATTACGC | CAGGTATCTG | ACCTCTTAAA |
| M-Isoform 1 | 151 | ACCCTTATTG | TACAGTGGAC | ACAATTACGC | CAGGTATCTG | ACCTCTTAAA |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| TM ---> | | | | | | |
| | | | | | | |
| B-Isoform 1 | 201 | ACAATACCAA | GCGAACCTTA | CTCAGCAGGA | TCGTATCCTG | GAAGGGCAGA |
| M-Isoform 1 | 201 | ACAATACCAA | GCGAACCTTA | CTCAGCAGGA | TCGTATCCTG | GAAGGGCAGA |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| ^ | | | | | | |
| | | | | | | |
| B-Isoform 1 | 251 | TGTTAGCCA | GCAGAAGGCA | GAAAACACTT | CACAGGAATC | AAAGAAGGAA |
| M-Isoform 1 | 251 | TGTTAGCCA | GCAGAAGGCA | GAAAACACTT | CACAGGAATC | AAAGAAGGAA |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| <--- 1st repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 301 | CTGAAAGGAA | AGATAGACAC | CCTCACCCAG | AAGCTGAACG | AGAAATCCAA |
| M-Isoform 1 | 301 | CTGAAAGGAA | AGATAGACAC | CCTCACCCAG | AAGCTGAACG | AGAAATCCAA |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 1st repeat | | | | | | |

Figure 3A

| | | | | | | |
|--|-----|-------------|-------------|--------------|------------|-------------|
| B-Isoform 1 | 351 | AGAGCAGGAG | GAGCTTCTAC | AGAAGAACATCA | GAACCTCCAA | GAAGCCCTGC |
| M-Isoform 1 | 351 | AGAGCAGGAG | GAGCTTCTAC | AGAAGAACATCA | GAACCTCCAA | GAAGCCCTGC |
| Isoform 7 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 1st repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 401 | AAAGAGCTGC | AAACTCTTCA | GAGGGAGTCCC | AGAGAGAACT | CAAGGGAAAG |
| M-Isoform 1 | 401 | AAAGAGCTGC | AAACTCTTCA | GAGGGAGTCCC | AGAGAGAACT | CAAGGGAAAG |
| Isoform 7 | 73 | ----- | ----- | -AGGAGTCCC | AGAGAGAACT | CAAGGGAAAG |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 1st repeat ---> <--- | | | | | | |
| | | | | | | |
| B-Isoform 1 | 451 | ATAGACACCA | TCACCCGGAA | GCTGGACGAG | AAATCCAAAG | AGCAGGAGGA |
| M-Isoform 1 | 451 | ATAGACACCA | TCACCCGGAA | GCTGGACGAG | AAATCCAAAG | AGCAGGAGGA |
| Isoform 7 | 102 | ATAGACACCA | TCACCCGGAA | GCTGGACGAG | AAATCCAAAG | AGCAGGAGGA |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 2nd repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 501 | GCTTCTGCAG | ATGATTCAAGA | ACCTCCAAGA | AGCCCTGCAG | AGAGCTGCAA |
| M-Isoform 1 | 501 | GCTTCTGCAG | ATGATTCAAGA | ACCTCCAAGA | AGCCCTGCAG | AGAGCTGCAA |
| Isoform 7 | 152 | GCTTCTGCAG | ATGATTCAAGA | ACCTCCAAGA | AGCCCTGCAG | AGAGCTGCAA |
| Isoform 8 | 73 | ----- | ----- | ----- | ----- | ----- |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 2nd repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 551 | ACTCTTCAGA | GGAGTCCCGAG | AGAGAACTCA | AGGGAAAGAT | AGACACCCCTC |
| M-Isoform 1 | 551 | ACTCTTCAGA | GGAGTCCCGAG | AGAGAACTCA | AGGGAAAGAT | AGACACCCCTC |
| Isoform 7 | 202 | ACTCTTCAGA | GGAGTCCCGAG | AGAGAACTCA | AGGGAAAGAT | AGACACCCCTC |
| Isoform 8 | 73 | -----A | GGAGTCCCGAG | AGAGAACTCA | AGGGAAAGAT | AGACACCCCTC |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 2nd -----> <---- 3rd repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 601 | ACCTTGAAAGC | TGAACGAGAA | ATCCAAAGAG | CAGGAGGAGC | TTCTACAGAA |
| M-Isoform 1 | 601 | ACCTTGAAAGC | TGAACGAGAA | ATCCAAAGAG | CAGGAGGAGC | TTCTACAGAA |
| Isoform 7 | 252 | ACCTTGAAAGC | TGAACGAGAA | ATCCAAAGAG | CAGGAGGAGC | TTCTACAGAA |
| Isoform 8 | 114 | ACCTTGAAAGC | TGAACGAGAA | ATCCAAAGAG | CAGGAGGAGC | TTCTACAGAA |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 3rd repeat | | | | | | |
| | | | | | | |
| B-Isoform 1 | 651 | GAATCAGAAC | CTCCAAGAAC | CCCTGCAAAG | AGCTGCAAAC | TTTCAGGTC |
| M-Isoform 1 | 651 | GAATCAGAAC | CTCCAAGAAC | CCCTGCAAAG | AGCTGCAAAC | TTTCAGGTC |
| Isoform 7 | 302 | GAATCAGAAC | CTCCAAGAAC | CCCTGCAAAG | AGCTGCAAAC | TTTCAGGTC |
| Isoform 8 | 164 | GAATCAGAAC | CTCCAAGAAC | CCCTGCAAAG | AGCTGCAAAC | TTTCAGGTC |
| Isoform 9 | 73 | ----- | ----- | ----- | ----- | ----- |
| 3rd repeat ---> | | | | | | |

Figure 3B

| | | |
|-------------|------|---|
| B-Isoform 1 | 701 | CTTGTCCACA AGACTGGCTC TGGCATAAAG AAAACTGTTA CCTCTTCCAT |
| M-Isoform 1 | 701 | CTTGTCCACA AGACTGGCTC TGGCATAAAG AAAACTGTTA CCTCTTCCAT |
| Isoform 7 | 352 | CTTGTCCACA AGACTGGCTC TGGCATAAAG AAAACTGTTA CCTCTTCCAT |
| Isoform 8 | 214 | CTTGTCCACA AGACTGGCTC TGGCATAAAG AAAACTGTTA CCTCTTCCAT |
| Isoform 9 | 75 | CTTGTCCACA AGACTGGCTC TGGCATAAAG AAAACTGTTA CCTCTTCCAT |
| | | |
| B-Isoform 1 | 751 | GGGCCCTTA GCTGGAAAA AAACCGGCAG ACCTGCCAAT CTTGGGTGG |
| M-Isoform 1 | 751 | GGGCCCTTA GCTGGAAAA AAACCGGCAG ACCTGCCAAT CTTGGGTGG |
| Isoform 7 | 402 | GGGCCCTTG GCTGGAAAA AAACCGGCAG ACCTGCCAAT CTTGGGTGG |
| Isoform 8 | 264 | GGGCCCTTA GCTGGAAAA AAACCGGCAG ACCTGCCAAT CTTGGGTGG |
| Isoform 9 | 125 | GGGCCCTTA GCTGGAAAA AAACCGGCAG ACCTGCCAAT CTTGGGTGG |
| | | |
| B-Isoform 1 | 801 | CCAGTTACTA CAAATTAAATG GTGCAGATGA TCTGACATTC ATCTTACAAG |
| M-Isoform 1 | 801 | CCAGTTACTA CAAATTAAATG GTGCAGATGA TCTGACATTC ATCTTACAAG |
| Isoform 7 | 452 | CCAGTTACTA CAAATTAAATG GTGCAGATGA TCTGACATTC ATCTTACAAG |
| Isoform 8 | 314 | CCAGTTACTA CAAATTAAATG GTGCAGATGA TCTGACATTC ATCTTACAAG |
| Isoform 9 | 175 | CCAGTTACTA CAAATTAAATG GTGCAGATGA TCTGACATTC ATCTTACAAG |
| | | |
| B-Isoform 1 | 851 | CAATTTCCA TACCACCTCC CCGTTCTGGA TTGGATTGCA TCGGAAGAAG |
| M-Isoform 1 | 851 | CAATTTCCA TACCACCTCC CCATTCTGGA TTGGATTGCA TCGGAAGAAG |
| Isoform 7 | 502 | CAATTTCCA TACCACCTCC CCATTCTGGA TTGGATTGCA TCGGAAGAAG |
| Isoform 8 | 364 | CAATTTCCA TACCACCTCC CCATTCTGGA TTGGATTGCA TCGGAAGAAG |
| Isoform 9 | 225 | CAATTTCCA TACCACCTCC CCATTCTGGA TTGGATTGCA TCGGAAGAAG |
| | | |
| B-Isoform 1 | 901 | CCTGGCCAAC CATGGCTATG GGAGAATGGA ACTCCTTGAA ATTTCAATT |
| M-Isoform 1 | 901 | CCTGGCCAAC CATGGCTATG GGAGAATGGA ACTCCTTGAA ATTTCAATT |
| Isoform 7 | 552 | CCTGGCCAAC CATGGCTATG GGAGAATGGA ACTCCTTGAA ATTTCAATT |
| Isoform 8 | 414 | CCTGGCCAAC CATGGCTATG GGAGAATGGA ACTCCTTGAA ATTTCAATT |
| Isoform 9 | 275 | CCTGGCCAAC CATGGCTATG GGAGAATGGA ACTCCTTGAA ATTTCAATT |
| | | |
| B-Isoform 1 | 951 | CTTTAAGACC AGGGCGTTT CTTTACAGCT ATATTCATCA GGCAACTGTG |
| M-Isoform 1 | 951 | CTTTAAGACC AGGGCGTTT CTTTACAGCT ATATTCATCA GGCAACTGTG |
| Isoform 7 | 602 | CTTTAAGACC AGGGCGTTT CTTTACAGCT ATATTCATCA AGCAACTGTG |
| Isoform 8 | 464 | CTTTAAGACC AGGGCGTTT CTTTACAGCT ATATTCATCA GGCAACTGTG |
| Isoform 9 | 325 | CTTTAAGACC AGGGCGTTT CTTTACAGCT ATATTCATCA GGCAACTGTG |
| | | |
| B-Isoform 1 | 1001 | CATACCTTCA AGACGGAGCT GTGTCGCTG AAAACTGCAT TCTAATTGCA |
| M-Isoform 1 | 1001 | CATACCTTCA AGACGGAGCT GTGTCGCTG AAAACTGCAT TCTAATTGCA |
| Isoform 7 | 652 | CATACCTTCA AGACGGAGCT GTGTCGCTG AAAACTGCAT TCTAATTGCA |
| Isoform 8 | 514 | CATACCTTCA AGACGGAGCT GTGTCGCTG AAAACTGCAT TCTAATTGCA |
| Isoform 9 | 375 | CATACCTTCA AGACGGAGCT GTGTCGCTG AAAACTGCAT TCTAATTGCA |
| | | |
| B-Isoform 1 | 1051 | TTCAGCATAT GTCAGAAGAA GACAAATCAT TTGCAAATTT AG----- |
| M-Isoform 1 | 1051 | TTCAGCATAT GTCAGAAGAA GACAAATCAT TTGCAAATTT AG----- |
| Isoform 7 | 702 | TTCAGCATAT GTCAGAAGAA GACAAATCAT TTGCAAATTT AG----- |
| Isoform 8 | 564 | TTCAGCATAT GTCAGAAGAA GACAAATCAT TTGCAAATTT AG----- |
| Isoform 9 | 425 | TTCAGCATAT GTCAGAAGAA GACAAATCAT TTGCAAATTT AG----- |

Figure 3C

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Isoform 1

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | 36 |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | 144 |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa tta cgc cag gta tct gac Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp | 192 |
| 50 55 60 | |
| ctc tta aaa caa tac caa gcg aac ctt act cag cag gat cgt atc ctg Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu | 240 |
| 65 70 75 80 | |
| gaa ggg cag atg tta gcc cag cag aag gca gaa aac act tca cag gaa Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Gln Glu | 288 |
| 85 90 95 | |
| tca aag aag gaa ctg aaa gga aag ata gac acc ctc acc cag aag ctg Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu | 336 |
| 100 105 110 | |
| aac gag aaa tcc aaa gag cag gag gag ctt cta cag aag aat cag aac Asn Glu Lys Ser Lys Glu Gln Glu Leu Leu Gln Lys Asn Gln Asn | 384 |
| 115 120 125 | |
| ctccaa gaa gcc ctg caa aga gct gca aac tct tca gag gag tcc cag Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln | 432 |
| 130 135 140 | |
| aga gaa ctc aag gga aag ata gac acc atc acc cgg aag ctg gac gag Arg Glu Leu Lys Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu | 480 |
| 145 150 155 160 | |
| aaa tcc aaa gag cag gag gag ctt ctg cag atg att cag aac ctc caa Lys Ser Lys Glu Gln Glu Leu Leu Gln Met Ile Gln Asn Leu Gln | 528 |
| 165 170 175 | |
| gaa gcc ctg cag aga gct gca aac tct tca gag gag tcc cag aga gaa Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu | 576 |
| 180 185 190 | |
| ctc aag gga aag ata gac acc ctc acc ttg aag ctg aac gag aaa tcc Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser | 624 |
| 195 200 205 | |
| aaa gag cag gag gag ctt cta cag aag aat cag aac ctc caa gaa gcc Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala | 672 |
| 210 215 220 | |

Figure 4A

Isoform 1

| | |
|---|------|
| ctg caa aga gct gca aac ttt tca ggt cct tgt cca caa gac tgg ctc | 720 |
| Leu Gln Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu | |
| 225 230 235 240 | |
| tgg cat aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa | 768 |
| Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu | |
| 245 250 255 | |
| aaa aac cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att | 816 |
| Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile | |
| 260 265 270 | |
| aat ggt gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc | 864 |
| Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr | |
| 275 280 285 | |
| acc tcc cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca | 912 |
| Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro | |
| 290 295 300 | |
| tgg cta tgg gag aat gga act cct ttg aat ttt caa ttc ttt aag acc | 960 |
| Trp Leu Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr | |
| 305 310 315 320 | |
| agg ggc gtt tct tta cag cta tat tca tca ggc aac tgt gca tac ctt | 1008 |
| Arg Gly Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu | |
| 325 330 335 | |
| caa gac gga gct gtg ttc gct gaa aac tgc att cta att gca ttc agc | 1056 |
| Gln Asp Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser | |
| 340 345 350 | |
| ata tgt cag aag aag aca aat cat ttg caa att tag | 1092 |
| Ile Cys Gln Lys Lys Thr Asn His Leu Gln Ile | |
| 355 360 | |

A

A

A

Figure 4B

Isoform 2

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca Lys Ser Cys Gly Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | 96 |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | 144 |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa tgatcgatc ctggaaaggc Ser Val Thr Leu Ile Val Gln Trp Thr Gln | 194 |
| 50 55 | |
| agatgttagc ccagcagaag gcagaaaaca cttcacagga atcaaagaag gaactgaaag gaaagataga caccctcacc cagaagctga acgagaaatc caaagagcag gaggagctc | 254 |
| 314 | |
| tacagaagaa tcagaacctc caagaagccc tgcaaagagc tgcaaactct tcagaggagt cccagagaga actcaaggga aagatagaca ccatcacccg gaagctggac gagaaatcca | 374 |
| 434 | |
| aagagcagga ggagcttctg cagatgattc agaacctcca agaagccctg cagagagctg caaactcttc agaggagtcc cagagagaac tcaagggaaa gatagacacc ctcaccttga | 494 |
| 554 | |
| agctgaacga gaaatccaaa gagcaggagg agcttctaca gaagaatcag aacctccaag aagccctgca aagagctgca aactttcag gtccttgccc acaagactgg ctctggcata | 614 |
| 674 | |
| aagaaaaactg ttacctcttc cgtggccct ttactggaa aaaagccggc agacctgcca atctttgggt ggcagttact acaaattaat gggcagatg | 734 |
| | 773 |

A

B

Figure 5

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Isoform 3

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | 96 |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | 144 |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa tta cgc cag gta tct gac Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp | 192 |
| 50 55 60 | |
| ctc tta aaa caa tac caa gcg aac ctt act cag cag gat cgt atc ctg Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu | 240 |
| 65 70 75 80 | |
| gaa ggg cag atg tta gcc cag cag aag gca gaa aac act tca ccg caa Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Pro Gln | 288 |
| 85 90 95 | |
| tca aag aag gaa ctg aaa gga aag ata gac acc ctc acc cag aag ctg Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu | 336 |
| 100 105 110 | |
| aac gag aaa tcc aaa gag cag gag gag ctt cta cag aag aat cag aac Asn Glu Lys Ser Lys Glu Gln Glu Leu Leu Gln Lys Asn Gln Asn | 384 |
| 115 120 125 | |
| ctc caa gaa gcc ctg caa aga gct gca aac tct tca gag gag tcc cag Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln | 432 |
| 130 135 140 | |
| aga gaa ctc aag gga aag ata gac acc ctc acc ttg aag ctg aac gag Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu | 480 |
| 145 150 155 160 | |
| aaa tcc aaa gag cag Lys Ser Lys Glu Gln | 495 |
| 165 | |

Figure 6

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Isoform 4

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | 96 |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | 144 |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa tta cgc cag gta tct gac Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp | 192 |
| 50 55 60 | |
| ctc tta aaa caa tac caa gcg aac ctt act cag cag gat cgt atc ctg Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu | 240 |
| 65 70 75 80 | |
| gaa ggg cag atg tta gcc cag cag aag gca gaa aac act tca cag gaa Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Gln Glu | 288 |
| 85 90 95 | |
| tca aag aag gaa ctg aaa gga aag ata gac acc ctc acc cag aag ctg Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu | 336 |
| 100 105 110 | |
| aac gag aaa tcc aaa gag cag gag gag ctt cta cag aag aat cag aac Asn Glu Lys Ser Lys Glu Gln Glu Leu Leu Gln Lys Asn Gln Asn | 384 |
| 115 120 125 | |
| ctc caa gaa gcc ctg caa aga gct gca aac ttt tca ggt cct tgt cca Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro | 432 |
| 130 135 140 | |
| caa gac tgg ctc tgg cat aaa gaa aac tgt tac ctc ttc cat ggg ccc Gln Asp Trp Leu Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro | 480 |
| 145 150 155 160 | |
| ttt agc tgg gaa aaa aac cgg cag acc tgc caa tct ttg ggt ggc cag Phe Ser Trp Glu Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln | 528 |
| 165 170 175 | |
| tta cta caa att aat ggt gca gat gat ctg aca ttc atc tta caa gca Leu Leu Gln Ile Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala | 576 |
| 180 185 190 | |
| att tcc cat acc acc tcc ccg ttc tgg att gga ttg cat cgg aag Ile Ser His Thr Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys | 621 |
| 195 200 205 | |

Figure 7

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Isoform 5

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat gag | 48 |
| Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Glu | |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca | 96 |
| Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg | 144 |
| Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa tgatcgatc ctggaaaggc | 194 |
| Ser Val Thr Leu Ile Val Gln Trp Thr Gln | |
| 50 55 | |
| agatgttagc ccagcagaag gcagaaaaaca cttcacagga atcaaagaag gaactgaaag | 254 |
| gaaagataga caccctcacc cagaagctga acgactccaa agagcaggag gagctacacc | 314 |
| ccccccgaac ctccaagaag ccctgcaaag agctgcaaac tcttcaggc cttgtccaca | 374 |
| agactggctc tggcataaaag aaaactgtta cctcttccat gggcccttta gctggaaaa | 434 |
| aaaccggcag acctgccaat ctttgggtgg gcagttacta caaattaatg gtgcagatga | 494 |
| tctgacattc atcttacaag caatttccca taccacctcc ctttcttggta ttggattgca | 554 |
| tcggaagaag cctggcaacc atgggtatgg gagaatggac ttctttgaat tttaattttt | 614 |
| aagacagggc gtttttacag ttttcataa ggacttgtga tacttagagg gctgggttcg | 674 |
| ttgaaatgat tctattggtt agcatgtaga aaaaaatt | 734 |

A

A

Figure 8

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Isoform 6

| | |
|---|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro | 96 |
| 20 25 30 | |
| tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu | 144 |
| 35 40 45 | |
| tca gtg acc ctt att gta cag tgg aca caa taggagtccc agagagaact Ser Val Thr Leu Ile Val Gln Trp Thr Gln | 194 |
| 50 55 | |
| caaggaaag atagacaccc tcaccttcaa gctgaacgag aaatccaaag agcaggagga gcttctacag aagaatcaga acctccaaga agccctgcaa agagctgcaa acttttcagg | 254 |
| tccttgccta caagactggc tctggataa agaaaactgt tacctttcc atgggccctt | 314 |
| tagctggaa aaaaaccggc agacctgcca atcttgggt ggccagttac tacaaattaa | 374 |
| tggtgcatat gatctgacat tcatcttaca agcaatttcc cataccacct ccccgttctg | 434 |
| gattggattt catcggaga agcctggcca accatggcta tgggagaatg gaactccctt | 494 |
| gaattttcaa ttctttaaga ccagggcgt ttctttacag ctatattcat caggcaactg | 554 |
| tgcataacctt caagacggac tgtgttcgct gaaaactgca ttcttaattgc attcagcata | 614 |
| tgtcaaaaga agacaaatca tttgcaaatt tagtgaatct aaagaat | 674 |
| | 721 |

A

A

Figure 9

Isoform 7

| | |
|---|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln 1 5 10 15 | 43 |
| aag tca tgt ggc aag aag cct aaa gag gag tcc cag aga gaa ctc aag Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys 20 25 30 | 96 |
| gga aag ata gac acc atc acc cgg aag ctg gac gag aaa tcc aaa gag Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu Lys Ser Lys Glu 35 40 45 | 144 |
| cag gag gag ctt ctg cag atg att cag aac ctc caa gaa gcc ctg cag Gln Glu Leu Leu Gln Met Ile Gln Asn Leu Gln Glu Ala Leu Gln 50 55 60 | 192 |
| aga gct gca aac tct tca gag gag tcc cag aga gaa ctc aag gga aag Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu Leu Lys Gly Lys 65 70 75 80 | 240 |
| ata gac acc ctc acc ttg aag ctg aac gag aaa tcc aaa gag cag gag Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu Gln Glu 85 90 95 | 288 |
| gag ctt cta cag aag aat cag aac ctc caa gaa gcc ctg caa aga gct Glu Leu Leu Gln Asn Gln Asn Leu Gln Glu Ala Leu Gln Arg Ala 100 105 110 | 336 |
| gca aac ttt tca ggt cct tgt cca caa gac tgg ctc tgg cat aaa gaa Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu Trp His Lys Glu 115 120 125 | 384 |
| aac tgt tac ctc ttc cat ggg ccc ttt ggc tgg gaa aaa aac cgg cag Asn Cys Tyr Leu Phe His Gly Pro Phe Gly Trp Glu Lys Asn Arg Gln 130 135 140 | 432 |
| acc tgc caa tct ttg ggt ggc cag tta cta caa att aat ggt gca gat Thr Cys Gln Ser Leu Gly Gly Gln Leu Gln Ile Asn Gly Ala Asp 145 150 155 160 | 480 |
| gat ctg aca ttc atc tta caa gca att tcc cat acc acc tcc cca ttc Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser Pro Phe 165 170 175 | 528 |
| tgg att gga ttg cat cgg aag aag cct ggc caa cca tgg cta tgg gag Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro Trp Leu Trp Glu 180 185 190 | 576 |
| aat gga act cct ttg aat ttt caa ttc ttt aag acc agg ggc gtt tct Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly Val Ser 195 200 205 | 624 |
| tta cag cta tat tca tca agc aac tgt gca tac ctt caa gac gga gct Leu Gln Leu Tyr Ser Ser Asn Cys Ala Tyr Leu Gln Asp Gly Ala 210 215 220 | 672 |
| gtg ttc gct gaa aac tgc att cta att gca ttc agc ata tgt cag aag Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys Gln Lys 225 230 235 240 | 720 |
| aag aca aat cat ttg caa att tag Lys Thr Asn His Leu Gln Ile | 744 |

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Isoform 8

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa gag gag tcc cag aga gaa ctc aag Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys | 96 |
| 20 25 30 | |
| gga aag ata gac acc ctc acc ttg aag ctg aac gag aaa tcc aaa gag Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu | 144 |
| 35 40 45 | |
| cag gag gag ctt cta cag aag aat cag aac ctc caa gaa gcc ctg caa Gln Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala Leu Gln | 192 |
| 50 55 60 | |
| aga gct gca aac ttt tca ggt cct tgt cca caa gac tgg ctt tgg cat Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gin Asp Trp Leu Trp His | 240 |
| 65 70 75 80 | |
| aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa aaa aac Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu Lys Asn | 288 |
| 85 90 95 | |
| cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att aat ggt Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile Asn Gly | 336 |
| 100 105 110 | |
| gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc acc tcc Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser | 384 |
| 115 120 125 | |
| cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca tgg cta Pro Phe Trp Ile Gly Leu His Arg Lys Pro Gly Gln Pro Trp Leu | 432 |
| 130 135 140 | |
| tgg gag aat gga act cct ttg aat ttt caa ttc ttt aag acc agg ggc Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly | 480 |
| 145 150 155 160 | |
| gtt tct tta cag cta tat tca tca ggc aac tgt gca tac ctt caa gac Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu Gln Asp | 528 |
| 165 170 175 | |
| gga gct gtg ttc gct gaa aac tgc att cta att gca ttc agc ata tgt Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys | 576 |
| 180 185 190 | |
| cag aag aag aca aat cat ttg caa att tag Gln Lys Lys Thr Asn His Leu Gln Ile | 606 |
| 195 200 | |

Figure 11

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Isoform 9

| | |
|--|-----|
| atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln | 48 |
| 1 5 10 15 | |
| aag tca tgt ggc aag aag cct aaa ggt cct tgt cca caa gac tgg ctc Lys Ser Cys Gly Lys Lys Pro Lys Gly Pro Cys Pro Gln Asp Trp Leu | 96 |
| 20 25 30 | |
| tgg cat aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu | 144 |
| 35 40 45 | |
| aaa aac cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile | 192 |
| 50 55 60 | |
| aat ggt gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gin Ala Ile Ser His Thr | 240 |
| 65 70 75 80 | |
| acc tcc cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro | 288 |
| 85 90 95 | |
| tgg cta tgg gag aat gga act cct ttg aat ttt caa ttc ttt aag acc Trp Leu Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr | 336 |
| 100 105 110 | |
| agg ggc gtt tct tta cag cta tat tca tca ggc aac tgt gca tac ctt Arg Gly Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu | 384 |
| 115 120 125 | |
| caa gac gga gct gtg ttc gct gaa aac tgc att cta att gca ttc agc Gln Asp Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser | 432 |
| 130 135 140 | |
| ata tgt cag aag aag aca aat cat ttg caa att tag Ile Cys Gln Lys Lys Thr Asn His Leu Gln Ile | 468 |
| 145 150 155 | |

Figure 12

A.

Isoform 1 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE
 Isoform 1 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE
 Isoform 1 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 3 (R1) QSKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE
 Isoform 3 (R3) ESQRELKGKIDTLTQKLNEKSKEQ...
 Isoform 4 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 7 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE
 Isoform 7 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 8 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG

B.

Isoform 1 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE
 Isoform 3 (R1) QSKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE
 Isoform 4 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG

C.

Isoform 1 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE
 Isoform 7 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE

D.

Isoform 1 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 3 (R3) ESQRELKGKIDTLTQKLNEKSKEQ...
 Isoform 7 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 8 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG

E.

Isoform 1 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE ^
 Isoform 1 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE ^
 Isoform 1 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 3 (R1) QSKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANSSE
 Isoform 3 (R3) ESQRELKGKIDTLTQKLNEKSKEQ...
 Isoform 4 (R1) ESKKELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 7 (R2) ESQRELKGKIDTITRKLDEKSKEQEELLQMIQNLQEALQRAANSSE
 Isoform 7 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 Isoform 8 (R3) ESQRELKGKIDTLTQKLNEKSKEQEELLQKNQNLQEALQRAANFSG
 human ESENELKEMIETLARKLNEKSKEQMELHHQNLNLQETLKRVANCSA

Figure 13

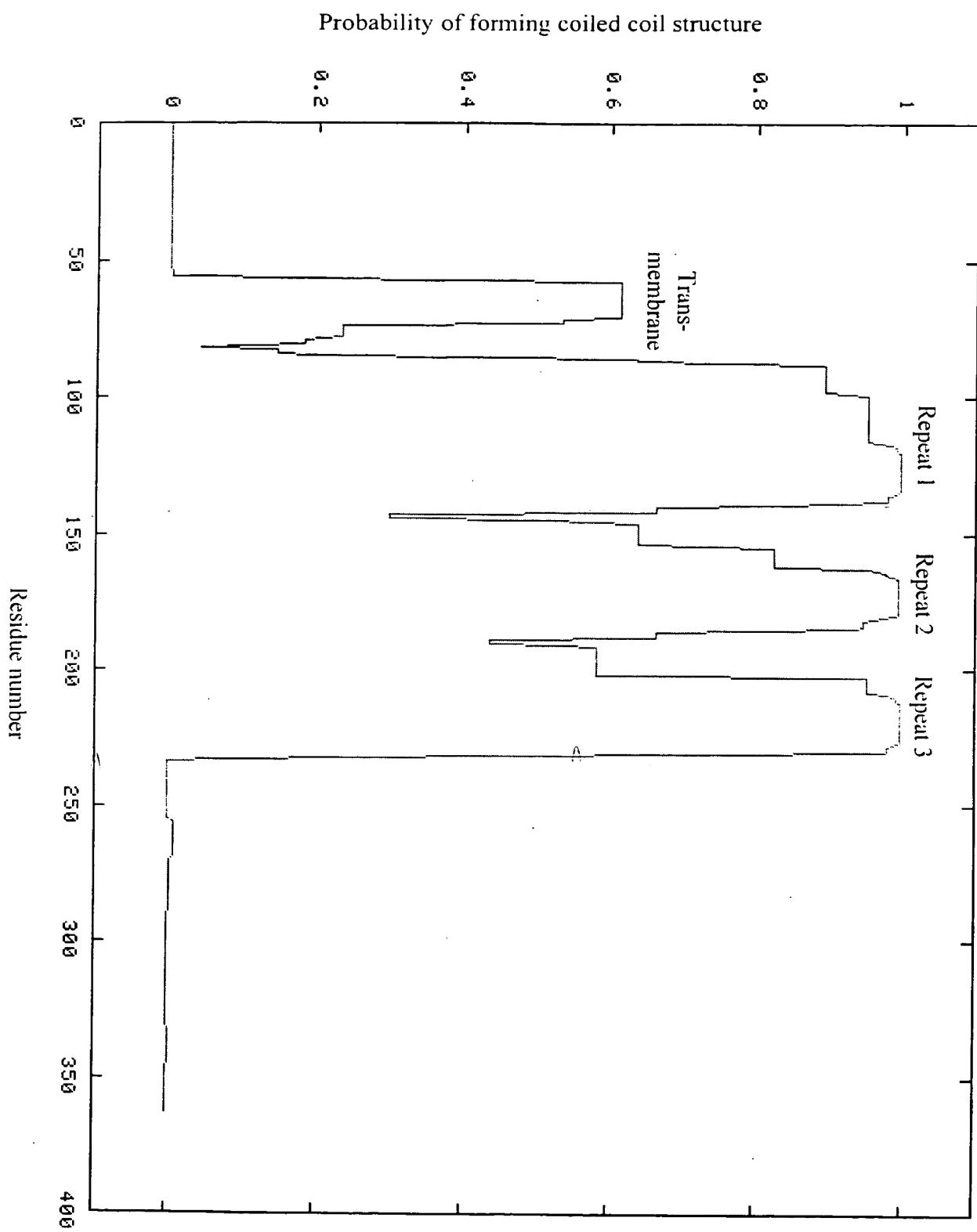


Figure 14